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MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Parris N. Glendening
Governor

Jane T. Nishida
Secretary

October 8, 1999

Mr. William Wentworth
Maryland Project Officer
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Wentworth:

Enclosed is the Site Survey for the Chevron USA/Baltimore Refinery (MD-143) located in Baltimore, Maryland. Based on the information available, MDE has further requirements for the investigation of hazardous waste at this site. MDE further recommends that the site does not warrant further investigation by EPA and that it be "archived" by EPA.

If you have additional questions concerning this matter, please contact William Burris or myself at (410) 631-3493.

Sincerely,

Arthur O'Connell

Arthur O'Connell, Chief
Site and Brownfields Assessments/State
Superfund Division

AOC:cp

Enclosure

cc: Mr. Richard Collins
Mr. Karl Kalbacher
Mr. William Burris

SITE SURVEY

CHEVRON USA / BALTIMORE REFINERY
Baltimore City, Maryland
(MD-143)

September 1999

Prepared by: Maryland Department of the Environment
Waste Management Administration
Site and Brownfields Assessments/State Superfund Division
2500 Broening Highway
Baltimore, MD 21224

Prepared for: U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

SITE SURVEY
Chevron USA / Baltimore Refinery
Baltimore City, Maryland
(MD-143)

AUTHORIZATION

The Maryland Department of the Environment, Waste Management Administration (MDE) performed a site survey of the Chevron USA / Baltimore Refinery as part of the Site Survey Initiative. This site survey was completed under the 1999 Cooperative Agreement between MDE and the U.S. Environmental Protection Agency (EPA).

SCOPE OF WORK

The Site Survey Initiative was proposed to reassess the status of those sites that were previously designated No Further Remedial Action Planned by the EPA. This initiative is intended to determine if site conditions have remained stable, provide a current description of the site, and identify and address any new pathways for contamination. The initiative is also intended to enable the State to determine whether the State should recommend further investigation by EPA, oversight by the State and no further investigation by EPA, or no further action be taken by EPA or the State and that the State designate the site as a "Formerly Investigated Site."

SITE DESCRIPTION

The Chevron USA / Baltimore Refinery is located at 1995 Chesapeake Avenue, Baltimore, Maryland. The approximate 75 acre property is located northeast of the intersection of Chesapeake Avenue and Fairfield Road near Curtis Bay (Figure 1).

The site consists of flat paved land developed for bulk petroleum storage and mixing. Several aboveground storage tanks, pipe lines, and associated administrative and maintenance buildings exist on the site (Figure 2).

Site conditions do not appear to have changed since the 1990 Site Investigation. The western portion of the site appears to be vacant and unused (Figures 3 through 6). [1]

OPERATIONAL HISTORY

Prior to 1948, the property was owned by Conoco. MDE records indicate that leaded tank bottoms were disposed of on the site in 1948. MDE suspected that the tank bottoms and associated lead-containing sludge were buried at the site.

American Bitumuls and Asphalt Company, a subsidiary of Chevron USA, purchased the property in 1948. The property was utilized in asphalt production, chemical transport and research and development. The company name changed to Chevron Asphalt in 1957, and again to Chevron USA – Baltimore Refinery in 1976.

In 1983, the site use was changed from asphalt production to a transport terminal. Prior to 1983, crude oil was imported to the site and used to produce asphalt. After 1983, two grades of finished asphalt were imported onto the site and a third grade of asphalt was produced on-site by adding either kerosene or naphtha to the imported asphalt.

PREVIOUS STUDIES

During 1985, the Maryland Department of Health and Mental Hygiene, Waste Management Administration conducted a Preliminary Assessment of the subject site. The Preliminary Assessment was conducted in response to the potential disposal of leaded tank bottoms on the site.[2]

In 1990, the NUS Corporation (NUS) completed a Site Inspection of the property. As part of the Site Inspection, NUS collected soil and groundwater samples from the site. Results of the soil analysis indicated the presence of petroleum hydrocarbons in the soil, including benzene, ethylbenzene, toluene, total xylenes, and naphthalene at levels exceeding 1,000 ug/Kg. Total petroleum hydrocarbons exceeded 117,000 mg/kg in one soil sample. Results of the groundwater analysis indicated the presence of benzene, toluene, ethylbenzene, and total xylenes at levels that exceed Maximum Contamination Levels (MCLs) for drinking water. Elevated levels of lead were detected in both the soils and groundwater.[2]

The toxicological evaluation completed by NUS and incorporated in the Site Inspection report concluded that the levels of contamination detected within the groundwater exceed MCLs. However, as the groundwater was not used as a potable water supply, there was no unacceptable level of risk to human health.

The property is listed as a large quantity waste generator (Resource Conservation and Recovery Act [RCRA] ID# MDD990686156). The facility generated no waste in 1997. In previous years, MDE's RCRA records indicate that the facility generated the following types of waste: oil sludge, PCBs from transformers, spent solvents, 1,1,1 trichloroethane and benzene.

During the 1980s and 1990s, numerous petroleum releases occurred at the site which were cleaned up, or were in the process of remediation, under the MDE's Oil Control Program. Some of the more notable releases include a 1987 8,500 gasoline release from a product line and a 1988 benzene release.

The property currently operates under MDE's Oil Control permit #98-OP-0857 and National Pollution Discharge Elimination System permit #98-DP-0043. Prior to 1998, the facility operated under an air quality permit for a volatile organic compound storage tank; however, that permit is no longer required.

GROUNDWATER PATHWAY

The groundwater of the site has been impacted by petroleum products over the decades of site use. Lead was also detected in the water at elevated levels during the 1990 NUS Site Inspection. As no one is currently using the groundwater at the site, there is no risk to human

health and safety. The MDE's Oil Control Program is currently regulating the monitoring and remediation of petroleum in the subsurface at the site.

SURFACE WATER PATHWAY

The surface water at the site is currently being treated by an oil-water separation system regulated by the MDE's Oil Control Program. There is no evidence that surface water on the site, consisting primarily of runoff from pavement, has been adversely impacted by subsurface contamination.

SOIL PATHWAY

The soil at the site has been impacted by petroleum products over the decades of site use. As the site is paved over, there is no unacceptable risk to human health. The MDE's Oil Control Program is currently regulating the monitoring and remediation of petroleum in the subsurface at the site.

AIR PATHWAY

The population around the site was not evaluated.

RECOMMENDATIONS

Based on the information available, MDE has further requirements related to the investigation of hazardous waste at this site. MDE further recommends that the site does not warrant further investigation by EPA and that it be "archived" by EPA.

REFERENCES

1 Site visit, April 1, 1999.

2 Site Inspection, Chevron Chemical- Baltimore Refinery, NUS Corporation, July 1990.

Alexandria Drafting Company's "ANNE ARUNDEL COUNTY STREET MAP" For Continuation

Figure 1

Figure 2

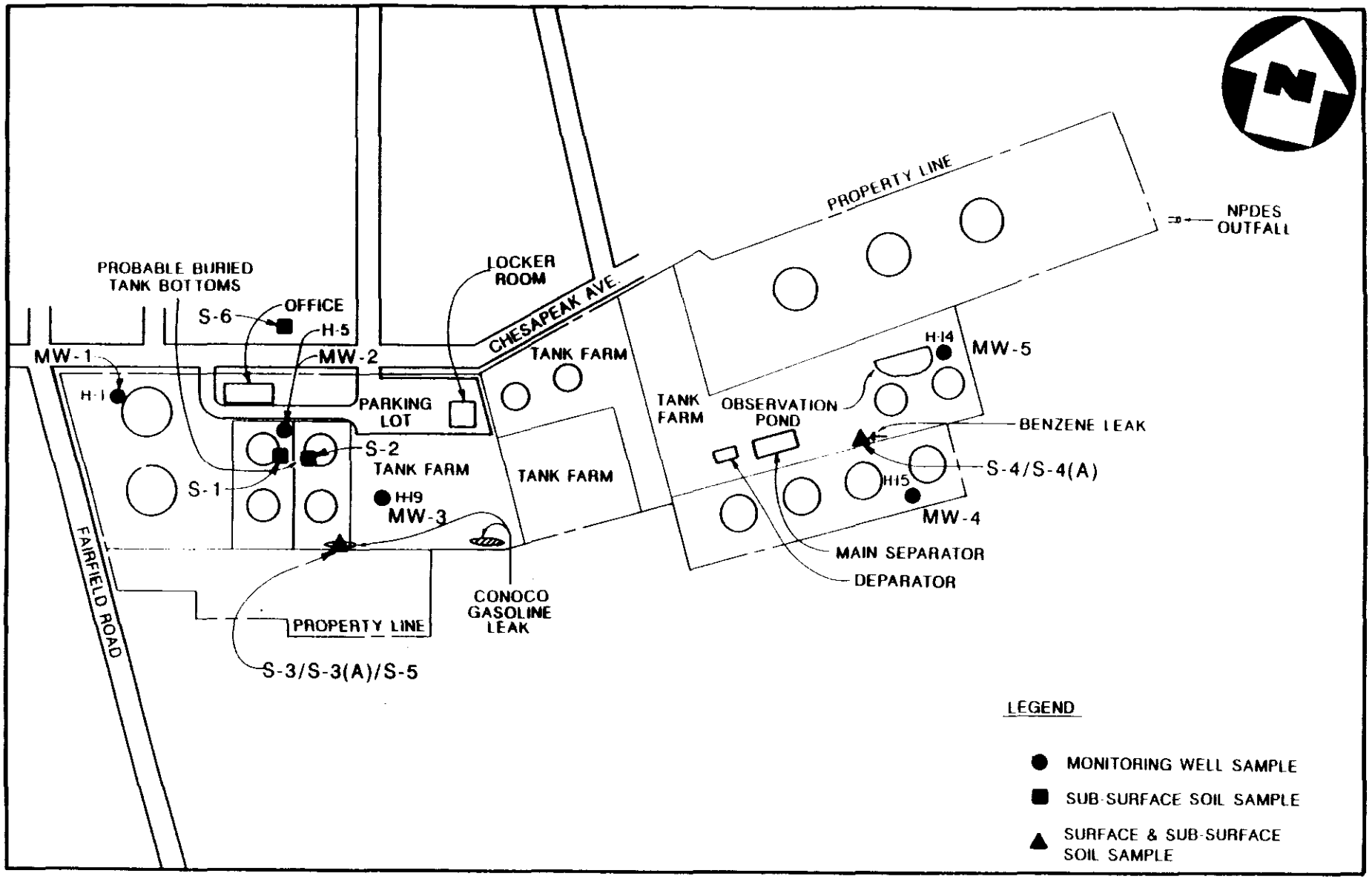

FIGURE 5.1

SAMPLE LOCATION MAP

CHEVRON CHEMICAL, BALTIMORE, MD.

(NO SCALE)

NUS CORPORATION

FIGURE 3: Entrance to the Chevron Terminal.

FIGURE 4: View of the northern part of the Chevron Site.

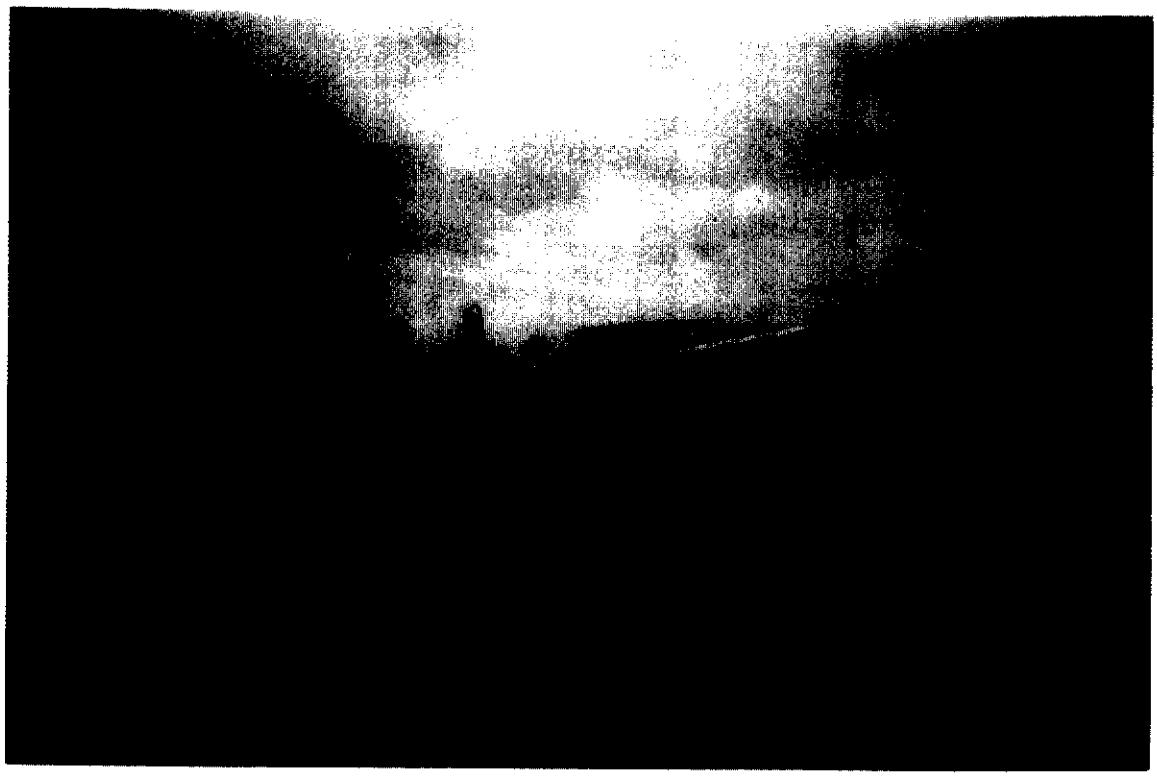

FIGURE 5: Looking east across the Chevron site.

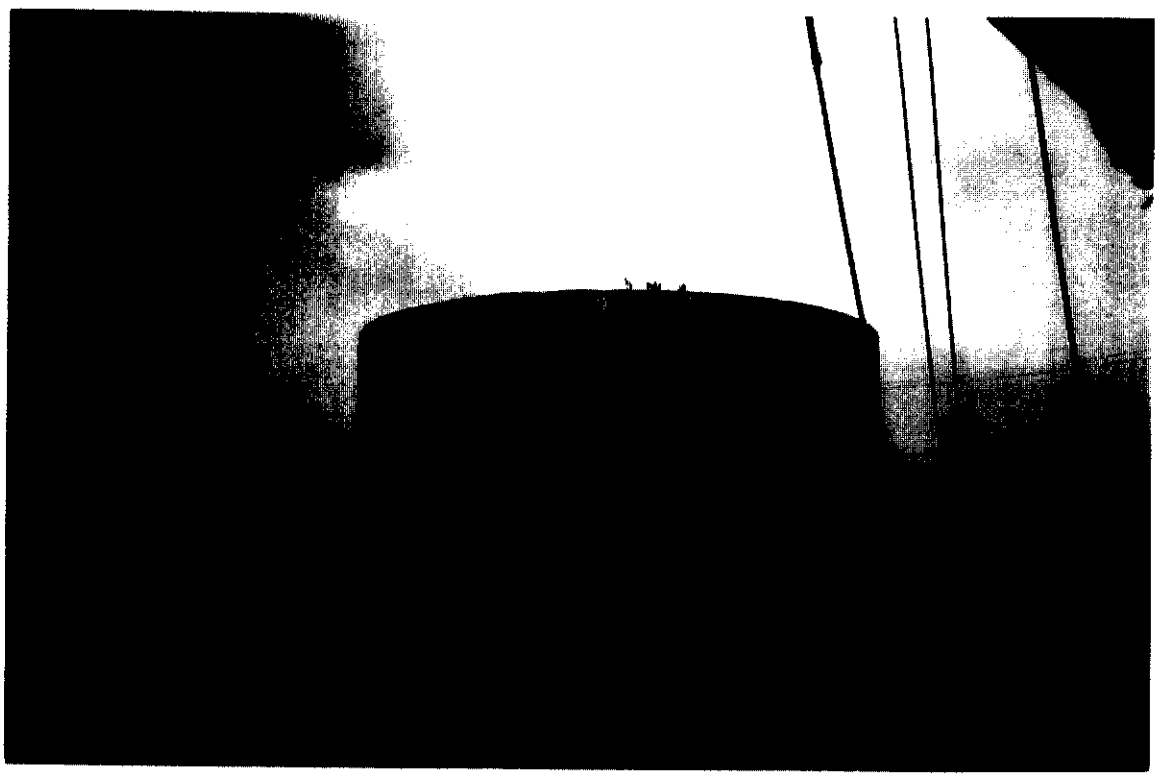

FIGURE 6: View of some of the storage tanks located on the Chevron site.